

【Sequence listing】

- <110> Scigen Harvest Co., Ltd.
- <120> Genes for S-adenosyl L-methionine:jasmonic acid carboxyl methyl transferase and a method for the development of pathogen- and stress-resistant plants using the genes
- <130> OPF0154
- <150> KR
- <151> 2000-06-13
- <160> 5
- <170> KopatentIn 1.71
- <210> 1
- <211> 1170
- <212> DNA
- <213> Arabidopsis thaliana
- <400> 1
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| atggaggtaa tgcgagttct tcacatgaac aaaggaaacg gggaacaacg ttatgccaaag | 60 |
| aactccaccg ctacagacaa cataatatct ctaggcagaa gagtaatgga cagggccttg | 120 |
| aagaaggttaa tgatgagcaa ttcagagatt tcgagcattg gaatcgccga cttagagctgc | 180 |
| tcctccggtc cgaacagtct cttgtccatc tccaacatag ttgacacgat ccacaacttg | 240 |
| tgctctgacc tcgaccgtcc agtccctgag ctacagatct ctctcaacga cctccctagc | 300 |
| aatgacttca actacatatg tgcctctttg ccagagtttt acgaccgggt taataataac | 360 |
| aaggagggtt tagggttcgg tcgtggagga ggagaatcgt gttttgtgc ggccgtccca | 420 |
| ggttcgttct acggacgttt gtttctctgc cggagccttc actttgtgca ttcttctct | 480 |
| agtttaccat ggttgtctca ggttccatgt cgtgaggcgg agaaggaaga caggacaata | 540 |
| acagctgatt tagaaaacat ggggaaaata tacatatcaa agacaagtcc taagagtgca | 600 |
| cataaagctt atgctcttca attccaaact gatttcttgg tttttttgag gtcacgatct | 660 |
| gaggagttgg tcccgggagg ccgaatggtt ttatcgttcc ttggtagaag atcactggat | 720 |
| cccacaaccg aagagagttg ctatcaatgg gaactcctag ctcaagctct tatgtccatg | 780 |

gccaaagagg gtatcatcga ggaagagaag atcgatgctt tcaacgctcc ttactatgct 840
 gcgagctccg aagagltgaa aatgggtgata gagaagaag ggtcatttc gatcgatagg 900
 cttagataa gtccgattga ttgggaaggt gggagtatca gtgaggagag ttatgacctt 960
 gcaataaggt ccaaacccga agccctagct agtggccgaa gagtgtctaa taccataaga 1020
 gctgtggtcg agccgatgct agaacctact ttcggtgaaa atgtgatgga cgagcttttt 1080
 gaaaggtatg caaagatcgt gggagagtag ttctatgtaa gctcgccacg atacgctatt 1140
 gttattcttt cgctcgtagg aaccggttga 1170

<210> 2
 <211> 1476
 <212> DNA
 <213> Arabidopsis thaliana

 <220>
 <221> CDS
 <222> (15)..(1181)
 <223> open reading frame for JMT

<400> 2
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 gga aac ggg gaa aca agt tat gcc aag aac tcc acc gct cag agc aac 95
 Gly Asn Gly Glu Thr Ser Tyr Ala Lys Asn Ser Thr Ala Gln Ser Asn
 15 20 25

 ata ata tct cta ggc aga aga gta atg gac gag gcc ttg aag aag tta 143
 Ile Ile Ser Leu Gly Arg Arg Val Met Asp Glu Ala Leu Lys Lys Leu
 30 35 40

 atg atg agc aat tca gag att tcg agc att gga atc gcc gac tta ggc 191
 Met Met Ser Asn Ser Glu Ile Ser Ser Ile Gly Ile Ala Asp Leu Gly
 45 50 55

 tgc tcc tcc ggt ccg aac agt ctc ttg tcc atc tcc aac ata gtt gac 239
 Cys Ser Ser Gly Pro Asn Ser Leu Leu Ser Ile Ser Asn Ile Val Asp
 60 65 70 75

 acg atc cac aac ttg tgt cct gac ctc gac cgt cca gtc cct gag ctc 287
 Thr Ile His Asn Leu Cys Pro Asp Leu Asp Arg Pro Val Pro Glu Leu
 80 85 90

aga gtc tct ctc aac gac ctc cct agc aat gac ttc aac tac ata tgt Arg Val Ser Leu Asn Asp Leu Pro Ser Asn Asp Phe Asn Tyr Ile Cys 95 100 105	335
gct tct ttg cca gag ttt tac gac cgg gtt aat aat aac aag gag ggt Ala Ser Leu Pro Glu Phe Tyr Asp Arg Val Asn Asn Asn Lys Glu Gly 110 115 120	383
tta ggg ttc ggt cgt gga gga gga gaa tcg tgt ttt gtg tcg gcc gtc Leu Gly Phe Gly Arg Gly Gly Glu Ser Cys Phe Val Ser Ala Val 125 130 135	431
cca ggt tcg ttc tac gga cgt ttg ttt cct cgc cgg agc ctt cac ttt Pro Gly Ser Phe Tyr Gly Arg Leu Phe Pro Arg Arg Ser Leu His Phe 140 145 150 155	479
gtg cat tct tct tct agt tta cat tgg ttg tct cag gtt cca tgt cgt Val His Ser Ser Ser Ser Leu His Trp Leu Ser Gln Val Pro Cys Arg 160 165 170	527
gag cgc gag aag gaa gac agg aca ata aca gct gat tta gaa aac atg Glu Ala Glu Lys Glu Asp Arg Thr Ile Thr Ala Asp Leu Glu Asn Met 175 180 185	575
ggg aaa ata tac ata tca aag aca agt cct aag agt gca cat aaa gct Gly Lys Ile Tyr Ile Ser Lys Thr Ser Pro Lys Ser Ala His Lys Ala 190 195 200	623
tat gct ctt caa ttc caa act gat ttc ttg gtt ttt ttg agg tca cga Tyr Ala Leu Gln Phe Gln Thr Asp Phe Leu Val Phe Leu Arg Ser Arg 205 210 215	671
tct gag gag ttg gtc ccg gga ggc cga atg gtt tta tcg ttc ctt ggt Ser Glu Glu Leu Val Pro Gly Gly Arg Met Val Leu Ser Phe Leu Gly 220 225 230 235	719
aga aga tca ctg gat ccc aca acc gaa gag agt tgc tat caa tgg gaa Arg Arg Ser Leu Asp Pro Thr Thr Glu Glu Ser Cys Tyr Gln Trp Glu 240 245 250	767
ctc cta gct caa gct ctt atg tcc atg gcc aaa gag ggt atc atc gag Leu Leu Ala Gln Ala Leu Met Ser Met Ala Lys Glu Gly Ile Ile Glu 255 260 265	815
gaa gag aag atc gat gct ttc aac gct cct tac tat gct gcg agc tcc Glu Glu Lys Ile Asp Ala Phe Asn Ala Pro Tyr Tyr Ala Ala Ser Ser 270 275 280	863
gaa gag ttg aaa atg gtg ata gag aaa gaa ggg tca ttt tcg atc gat	911

Glu Glu Leu Lys Met Val Ile Glu Lys Glu Gly Ser Phe Ser Ile Asp
 285 290 295
 agg ctt gag ata agt ccg att gat tgg gaa ggt ggg agt atc agt gag 959
 Arg Leu Glu Ile Ser Pro Ile Asp Trp Glu Gly Gly Ser Ile Ser Glu
 300 305 310 315
 gag agt tat gac ctt gca ata agg tcc aaa ccc gaa gcc cta gct agt 1007
 Glu Ser Tyr Asp Leu Ala Ile Arg Ser Lys Pro Glu Ala Leu Ala Ser
 320 325 330
 ggc cga aga gtg tct aat acc ata aga gct gtg gtc gag ccg atg cta 1055
 Gly Arg Arg Val Ser Asn Thr Ile Arg Ala Val Val Glu Pro Met Leu
 335 340 345
 gaa cct act ttc ggt gaa aat gtg atg gac gag ctt ttt gaa agg tat 1103
 Glu Pro Thr Phe Gly Glu Asn Val Met Asp Glu Leu Phe Glu Arg Tyr
 350 355 360
 gca aag atc gtg gga gag tac ttc tat gta agc tcg cca cga tac gct 1151
 Ala Lys Ile Val Gly Glu Tyr Phe Tyr Val Ser Ser Pro Arg Tyr Ala
 365 370 375
 att gtt att ctt tcg ctc gtt aga acc ggt tgatcgtgt tataacatat 1200
 Ile Val Ile Leu Ser Leu Val Arg Thr Gly
 380 385
 gccaatatac atgtctttgg gcctacaatg acatgatttg gtagttttct aatcaagcat 1260
 atgtaataata atttgcttcg agaataaaat aataaaaataa agtgtgatgt tacggtagac 1320
 ccttttttt tttttctat ttacggtaga cctatagtat taaaacaaat agaatcagct 1380
 ggttcggacc ttgaaatgag agagcttgga tgcattgaga cgcattagtc gtgaattatt 1440
 caaatagaac taccttttgg gccaaaaaaa aaaaaa 1476

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 <211> 389
 <212> PRT
 <213> Arabidopsis thaliana

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 Ser Tyr Ala Lys Asn Ser Thr Ala Gln Ser Asn Ile Ile Ser Leu Gly
 20 25 30

Arg Arg Val Met Asp Glu Ala Leu Lys Lys Leu Met Met Ser Asn Ser
35 40 45

Glu Ile Ser Ser Ile Gly Ile Ala Asp Leu Gly Cys Ser Ser Gly Pro
50 55 60

Asn Ser Leu Leu Ser Ile Ser Asn Ile Val Asp Thr Ile His Asn Leu
65 70 75 80

Cys Pro Asp Leu Asp Arg Pro Val Pro Glu Leu Arg Val Ser Leu Asn
85 90 95

Asp Leu Pro Ser Asn Asp Phe Asn Tyr Ile Cys Ala Ser Leu Pro Glu
100 105 110

Phe Tyr Asp Arg Val Asn Asn Asn Lys Glu Gly Leu Gly Phe Gly Arg
115 120 125

Gly Gly Gly Glu Ser Cys Phe Val Ser Ala Val Pro Gly Ser Phe Tyr
130 135 140

Gly Arg Leu Phe Pro Arg Arg Ser Leu His Phe Val His Ser Ser Ser
145 150 155 160

Ser Leu His Trp Leu Ser Gln Val Pro Cys Arg Glu Ala Glu Lys Glu
165 170 175

Asp Arg Thr Ile Thr Ala Asp Leu Glu Asn Met Gly Lys Ile Tyr Ile
180 185 190

Ser Lys Thr Ser Pro Lys Ser Ala His Lys Ala Tyr Ala Leu Gln Phe
195 200 205

Gln Thr Asp Phe Leu Val Phe Leu Arg Ser Arg Ser Glu Glu Leu Val
210 215 220

Pro Gly Gly Arg Met Val Leu Ser Phe Leu Gly Arg Arg Ser Leu Asp
225 230 235 240

Pro Thr Thr Glu Glu Ser Cys Tyr Gln Trp Glu Leu Leu Ala Gln Ala
245 250 255

Leu Met Ser Met Ala Lys Glu Gly Ile Ile Glu Glu Glu Lys Ile Asp
260 265 270

Ala Phe Asn Ala Pro Tyr Tyr Ala Ala Ser Ser Glu Glu Leu Lys Met
275 280 285

Val Ile Glu Lys Glu Gly Ser Phe Ser Ile Asp Arg Leu Glu Ile Ser
290 295 300

Pro Ile Asp Trp Glu Gly Gly Ser Ile Ser Glu Glu Ser Tyr Asp Leu
 305 310 315 320

Ala Ile Arg Ser Lys Pro Glu Ala Leu Ala Ser Gly Arg Arg Val Ser
 325 330 335

Asn Thr Ile Arg Ala Val Val Glu Pro Met Leu Glu Pro Thr Phe Gly
 340 345 350

Glu Asn Val Met Asp Glu Leu Phe Glu Arg Tyr Ala Lys Ile Val Gly
 355 360 365

Glu Tyr Phe Tyr Val Ser Ser Pro Arg Tyr Ala Ile Val Ile Leu Ser
 370 375 380

Leu Val Arg Thr Gly
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<210> 4
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> 5' primer for PCR of JMT gene

<400> 4
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<210> 5
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> 3' primer for PCR of JMT gene

<400> 5
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